

### Abstract

The invention relates to the human PEM polypeptide that plays an important role for the maturation of sperm and for Alzheimer's disease, and the nucleic acid that codes for them.

The invention comprises the use of PEM as a target in male birth control and for the treatment and diagnosis of male infertility and Alzheimer's disease. The invention also includes a selection process for PEM antagonists as well as the production of binding molecules, which specifically detect PEM. In addition, genes that are regulated by the PEM gene are part of this invention.